

Summary of main comments received during the 2018 public consultation on ICS Version 2.0 and their resolution

Introduction

- Between 31 July and 30 October 2018, the IAIS consulted on ICS Version 2.0.
- The IAIS received numerous comments from both Members and Stakeholders that provided valuable input for further improvements and revisions.
- With this document the IAIS provides responses to the main comments received during the ICS Version 2.0 public consultation.

Main comments on MAV

Ref.	Summary of comments received	IAIS response
5.1 Market adjusted valuation (MAV) approach	Discounting curves: Some modification of the parameters (eg long-term forward rate (LTFR), last observed term (LOT)) used to derive discounting curves are proposed. • Instruments: Use government bonds as the default rather than a choice between government bonds and Swaps. • LOT: Consistency of the deep, liquid and transparent (DLT) with accounting for assets longer than the LOT • Calibration of LTFR: Granularity of the grouping between currencies to determine the real rate is too broad and mixes non-homogeneous economic situations.	Some of the parameters used to derive the discounting curves have been modified: • Instruments: The choice of the instrument is grounded on liquidity considerations, as well as the perceived representativeness of the investments held by the insurance companies operating in that jurisdiction. The chosen instrument underlying Segment 1 can therefore only be changed based on supervisory judgment. • LOT: The assessment of the depth and liquidity of the swap market is carried out on the basis of swap trade data, in particular the number and notional amount of trades. Given the specificity of government bond markets, a different approach is followed to assess the DLT nature of government bond rates. The assessment starts from the analysis of trade volume and trade frequency of government bonds, for all currencies. Decisions on depth and liquidity of the government bond market are based primarily on these criteria. • Calibration of LTFR: an intermediate classification was introduced between the previous split of Developed and Emerging Market currencies for expected real interest rates. This classification, referred to as “Other Developed” has an expected real interest rate of 2.4% (between the rates for Developed and Emerging Markets). Affected currencies include HKD, ILS, KRW and TWD.

5.1 Market adjusted valuation (MAV) approach	Three-bucket approach: Refinements to the methodology are proposed. • Bucketing criteria: criteria are overly prescriptive. • Eligible assets for the spread calculation: more assets should be recognized as eligible. • Spread over LTFR: replace the 10bp placeholder by a data calibrated add-on. • Use of internal ratings for the spread calculation:	Some refinements to the methodology have been adopted: • The bucketing criteria have been refined. Liabilities that are partially, rather than fully, matched will be recognised. The longer the period of matching, the larger the benefit granted in the spread calculation. After the matching period ends, the spread is phased out, while ensuring that the spread stays between that of the General Bucket and the maximum possible spread of the Middle Bucket. • Eligible assets for the spread calculation: The list of eligible assets has not been expanded. Indeed, a key feature of the Top and Middle Buckets is the matching of cash flows, which cannot be ensured when considering equity like products. • The spread over LTFR has been refined and depends on the real interest rate classifications (developed, other developed and emerging) used for the calculation of the LTFR. • Use of internal ratings: As things currently stand, internal ratings cannot be used within the MAV approach.
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Main comments on MOCE

Ref.	Summary of comments received	IAIS response
5.2 Margin over current estimate (MOCE)	Conceptual Issues: There were many comments on the broader conceptual issues relating to the MOCE, covering its purpose and consistency with the ICS regime and how it should be reflected in the balance sheet and solvency ratio. Specifically the following points were raised: - the purpose and rationale for a MOCE in the ICS; - whether or not there is double counting; - whether or not MOCE needs to be deducted from the capital requirement; - whether the MOCE will be used as an MCR or as capital resources; - whether resolution mechanisms or safety nets should be reflected in the calibration of the MOCE; and - Use of other policy measures such as recovery and cash flow and loss recognition testing rather than having a MOCE	The purpose and construction of the MOCE within the capital standard is designed to capture the inherent risks due to uncertainty of cash flows. Consequently, the sum of Current Estimate and MOCE aims to capture the market adjusted value of insurance liabilities.
5.2 Margin over current estimate (MOCE)	Methodology: The following issues were raised on the methodologies being tested for MOCE: - The Non-Life P-MOCE is a measure of uncertainty and therefore meets ICP14.9; - The P-MOCE should use the same approach for life and non-life business - In reality, IAIG's are unlikely to transfer their liabilities in a stress situation, which brings into	The Percentile MOCE is a simplified approach that intends to capture the differences in Life and Non-Life business through different calibrations, while keeping the principle of a higher price for higher uncertainty. In addition, there is recognition of the tax implications of the MOCE. ICS Version 2.0 is based on a total balance sheet approach using market (adjusted) values. Consequently, the value of

	question the appropriateness of C-MOCE for the ICS • MOCE should be tax effected; • A simplified approach should be used for the ICS; and • There was support for both the P and C MOCE and support for both deduction and no deduction with no clear preference.	insurance liabilities is calculated as the sum of Current Estimate and MOCE.
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Main comments on Capital Resources

Ref.	Summary of comments received	IAIS response
6 Reference ICS: Capital Resources	Structural subordination • The additional conditions set for the recognition of structural subordination need to be better defined. In particular, criteria should be developed regarding the tracking of proceeds down-streamed to insurance subsidiaries. • The requirement of a supervisory approval for the upstreaming of dividends should be reviewed.	The IAIS acknowledges the need for a consistent application of the additional conditions set for the recognition of structural subordination. With regard to the tracking of proceeds to insurance subsidiaries, the IAIG and its group-wide supervisor should determine if the proceeds of the instruments, which have been down-streamed into insurance subsidiaries, are being tracked and reported appropriately. On the issue of supervisory approval for the upstreaming of dividends, the IAIS has adjusted this requirement to recognise the role of supervisory controls and power of intervention, even in the absence of a formal supervisory approval.
6 Reference ICS: Capital Resources	Acceleration clauses in Tier 2 instruments Respondents expressed split views regarding the treatment of acceleration clauses: • Some respondents consider that acceleration clauses negatively impact the quality of capital,	The IAIS will retain criterion i) for Tier 2 Paid-Up financial instruments, which does not allow acceleration clauses that may be triggered in going concern. However, a national discretion will be allowed in order to recognise acceleration clauses, provided all other criteria are met.

	contradict certain Tier 2 criteria and ultimately undermine policyholder protection. Some respondents consider that acceleration clauses do not negatively impact policyholder protection provided that the regulatory regime provides for appropriate supervisory controls over distributions related to structurally subordinated debt.	The Kuala Lumpur Agreement stated that: <i>“The reference ICS could include a limited number of national discretions for issues that cannot be resolved. If national discretions are used, the impact of those national discretions should be reconcilable.”</i> Therefore, jurisdictions that wish to recognise acceleration clauses that may be triggered in going concern may do so, provided IAIGs from those jurisdictions provide a reconciliation of the impact between the reference ICS with and without acceleration clause that may be triggered in going concern.
6 Reference ICS: Capital Resources	Level playing field Concerns were expressed regarding the differences in treatment of capital elements between mutual and non-mutual insurance groups. The responses mention in particular: - The creation of an unlevel playing field between mutual and non-mutual insurance groups - The lack of justification provided by the IAIS for such different treatment - The weakening of capital quality (and therefore of policyholder protection) for mutual insurance groups.	In developing a minimum capital standard, the IAIS considered the specificities of mutual insurance groups, including their distinct legal structure that prevents them from issuing ordinary shares. As with any considerations for qualifying capital resources, the goal for determining the criteria is to preserve an overall minimum quality of capital, ensure consistent implementation and, ultimately, policyholder protection.
6 Reference ICS: Capital Resources	Capital composition limits (including proposed limit on third party capital (TPC)) On general capital composition limits, the main concern expressed is related to the lack of transparency and justification of the limits that were chosen. Some respondents think that there should be no tiering and associated limits.	Tiering rules and associated limits are one way of practically <i>“[...] assessing the quality and suitability of capital resources, having regard to their ability to absorb losses on both a going-concern and wind-up basis.”</i> consistently with ICP 17.11. With regard to the more specific limit on Third Party Capital, the IAIS will consider that issue during the monitoring period, in the

	On a potential TPC limit, the expressed views were split between those agreeing with the principle of a limitation of TPC and those thinking it is not necessary or lacks supporting rationale. Some respondents think the proposed formula is inappropriate.	context of a broader work on availability and fungibility of capital elements.
6 Reference ICS: Capital Resources	Transitional arrangements: Respondents were generally supportive of transitional arrangements. In terms of length of the transitional period, proposals were made such as “end 2025”, “10 years”, “covering the outstanding duration of existing instruments”.	During the monitoring period, the IAIS will consider transitional arrangements (eg with respect to qualifying capital resources) that may help jurisdictions with implementation of the ICS as a PCR following the end of the monitoring period. For example, it is not uncommon to allow for gradual phase-in of new requirements depending on the extent of system changes that may be expected of impacted insurance groups. Transitional periods for implementation are also common where requisite laws and/or regulations are necessary to be adopted by relevant jurisdictions.

Main comments on Risk mitigation

Ref.	Summary of comments received	IAIS response
7.3 Risk mitigation	Renewal of risk mitigation. The following areas of the current approach were highlighted as being in need of review: • Revise recognition of reinsurance (including the costs associated) and make sure it is consistent with the recognition of other forms of risk mitigation • Review the 80% cap for renewal as some respondents thought that it is a blunt tool, not necessary for liquid instruments and not a true reflection of the economic impact. • Review the criteria for the frequency of renewal: ○ The requirement of the hedging frequency being longer than one year does not promote good risk management practices so any criteria linked to the frequency should be revised. ○ Relaxation from 3 month to 1 month may (and may not) be appropriate for currency and equity risk.	The current approach for the recognition of risk mitigation tries to strike a balance between accurately reflecting the economic reality of all instruments held, and setting a prudential standard that reflects all the risks to which the instruments are exposed. In setting the specifications, the intention was to achieve a balance between accurately measuring specific elements of the balance sheet and consistent treatment of all forms of risk mitigation.
7.3 Risk mitigation	Dynamic Hedging The following suggestions were made on the way forward for recognising dynamic hedging in the ICS: • Distinguish between (and encourage) dynamic hedging that mitigates risk from derivative programs that aim to take on risk; and	Distinguishing between risk mitigating strategies and risk taking strategies is fundamental and will therefore be one of the key criteria when assessing any approach. As part of this process, the IAIS is always open to constructive engagement with industry practitioners.

	The IAIS should engage with industry dynamic hedging practitioners and experts to develop the appropriate recognition of dynamic hedging in ICS Version 2.0.	
7.3 Risk mitigation	Dynamic Hedging – Other Methods The following suggestions were made on how to reflect dynamic hedging in the ICS using other methods of calculation of the ICS capital requirement: - Applying a hedge effectiveness factor to risk charges; and - Introduction of stepped shocks instead of single shock at time zero.	A number of options are under consideration for the potential recognition of Dynamic Hedging. They include the possibility of calibrating an adjustment to risk charges to reflect the effectiveness of any risk mitigation strategies. These options will be considered as part of the work to be carried out for “other methods of calculation of the ICS capital requirement” during the monitoring period. Therefore, they will be part of additional reporting, at the option of the group-wide supervisor, and will be considered for inclusion in the ICS by the end of the monitoring period.
7.3 Risk mitigation	Dynamic Hedging – Internal Models The following suggestions were made on how to reflect dynamic hedging in the ICS using internal models: - Follow US regulation and allow firms to use their own model, and actual starting hedges, along with a clearly defined hedging strategy¹ to model the tail risks including the dynamic hedging, and considering all the costs; - Model real-world (not risk-neutral) stock and bond prices stochastically over the solvency time horizon, along with the insurer’s actions under its dynamic hedging program. Then apply the solvency confidence measure to the insurer’s losses over all scenarios;	A number of options are under consideration for the potential recognition of dynamic hedging via internal models in the ICS. These include drawing on approaches currently employed locally by supervisory authorities. These options will be considered during the monitoring period together with the work on the potential use of internal models.

¹ "Clearly Defined Hedging Strategy" (CDHS) under U.S. Principles Based Reserving.

	- Criteria that are applied to the approval for use of internal models should be met in order to approve an insurer using its own model of its dynamic hedging program; and - Stochastic valuation of minimum guaranteed liabilities for variable annuities where the effect of risk mitigation techniques is calculated based on a weighted average of results that reflect rebalancing and that do not consider rebalancing.	
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Main comments on Look-through and Management actions

Ref.	Summary of comments received	IAIS response
7.4 Look-through	Proportionality for look-through Full look-through is in practice difficult (and sometimes impossible) to achieve, therefore the IAIS should consider simplifications, such as: - Calculating the risk charges based on the benchmark index for the fund / underlying target allocation Applying a materiality threshold (under which the look through requirement would not apply).	ICS Version 2.0 for the monitoring period allows for a partial look-through to be applied when a full look-through is not possible. For example, for an investment fund it could be assumed that the fund first invests, to the maximum extent allowed under its mandate, in the asset classes with the highest risk charge, and then continues making investments in descending order until the maximum total investment level is reached.
7.5 Management actions	Scope of management actions General support for recognising premium increases in a way similar to the reduction of discretionary benefits. The similarity between both mechanisms has been particularly highlighted in the case of reinsurance business (industry). In addition, the possibility to adjust	The cap on the overall credit allowed in ICS Version 2.0 for the monitoring period will remain at the IAIG's total insurance liabilities for future bonus or other discretionary benefits.

	other factors such as Cost of Insurance (North American Life insurers) or Market Value Adjuster (UK industry) has been mentioned.	
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Main comments on Life risks

Ref.	Summary of comments received	IAIS response
7.6 Mortality and Longevity risks	Need for a refined / more granular approach [mortality / longevity / morbidity-disability] The following suggestions were made: - inclusion of a trend component for longevity (+ decrease in the level stress to compensate) - geographical segmentation / diversification - Stresses should be applied over the entire life of contracts whereas the calibration is using volatility to estimate a one-year shock => design of a graded stress over time (eg for mortality: 12.5% in the first year, 2.5% in the following years) - differentiation of stress factors by age group for mortality / longevity Note, though, that a majority of respondents are in agreement with the current design, and some even explicitly support keeping it for the future.	In the past, the IAIS tested different variations of the approach to Life risks; the approach presented in the ICS Version 2.0 Consultation Document achieves a balance built upon the lessons learned from those various attempts and is generally supported by respondents to the consultation. The IAIS will continue to collect information in order to inform potential future refinements to calibration for Life risks.
7.7 Morbidity/Disability risk	Design of the Morbidity / disability risk charge Most respondents are happy with the new 2-bucket segmentation, however some would favour narrowing the segmentation down to a single bucket.	The IAIS considers that the current approach strikes an acceptable balance between risk sensitivity and complexity. The IAIS will continue to collect information in order to inform potential future refinements to calibration for Life risks.

	Some consider that insurers are actually exposed to both an increase of inception rates and a decrease of recovery rates at the same time.	
7.8 Lapse risk	Treatment of homogeneous risk groups [lapse] Flooring of homogeneous risk groups to zero (ie not allowing for any offset between risk groups sensitive to an increase and those sensitive to a decrease in lapse rates) is too onerous. Policyholder decisions are not based on whether the lapse option is in the money, but instead on their own circumstances.	The IAIS has tested different variations of the approach to Lapse risk; the current approach achieves a balance built upon the lessons learned from those various attempts. The IAIS will continue to collect information in order to inform potential future refinements to calibration for Life risks.
7.6 – 7.8	Calibration [mortality, longevity, morbidity/disability, lapse] The level of stresses is generally perceived as too high. The IAIS should continue data collections, and leverage jurisdictional experience. The IAIS should publish the calibration methodology and exchange with Volunteer Groups on the issue.	The IAIS collected data for the calibration of mortality, morbidity, lapse and expense risks as part of the 2018 Field Testing exercise. Based on the data received, the calibration was updated accordingly. The IAIS will continue to collect information in order to inform potential future refinements to calibration for Life risks.
7.9 Expense risk	Design of the Expense risk charge Several proposals have been made, in particular: - de-correlating the level and the inflation components of the stress (ie applying a correlation factor between the level capital charge and the inflation capital charge, rather than summing them) - not applying the inflation stress on a permanent basis - adjusting the post-stress discount rate by recalculating it based on the stressed level of	The IAIS collected data for the calibration of mortality, morbidity, lapse and expense risks as part of the 2018 Field Testing exercise. Data received did not indicate that the calibration for the Expense risk is inappropriate. The IAIS will continue to collect information in order to inform potential future refinements to calibration for Life risks. Regarding the design of the inflation stress, the aggregation / diversification structure of ICS Version 2.0 for the monitoring period assumes an independent calculation of all individual risk charges (the correlation between risk factors is reflected in the

	inflation, in order to cancel out (at least partly) the impact of the inflation stress.	aggregation matrices). For that reason, the Life expense risk does not include an explicit stress on interest rates, since those are separately modelled in the Interest rate risk module. In addition, the factors affecting expense inflation need not be the same as the factors affecting general inflation, and hence there may not be a direct relationship between the two. The grading down of the expense inflation stress takes into consideration that expense inflation can be affected by factors such as business volumes, and to a certain extent may be within the control of the insurer. The grading down of the expense inflation stress is intended to strike a balance between the ability of the insurer to control its expenses and the fact that inflation is not fully within the control of the insurer.
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Main comments on Non-life risks

Ref.	Summary of comments received	IAIS response
7.10 Premium and Claims Reserve risks	Profitability adjustment: Some respondents believe there should not be a profitability adjustment as it adds too much complexity and/or that focus should be on lapse risk, while others believe it is necessary in order to make the overall ICS internally consistent.	Stakeholders had mixed views on whether a profitability adjustment for the premium risk was necessary. The IAIS decided to discontinue the investigation of a profitability adjustment in the design of ICS Version 2.0 for the monitoring period. The IAIS will clarify which expenses should be included in the current estimate and incorporate a discussion on the interaction between valuation and the development of the factors in a future non-life calibration paper to ensure that the overall calibration is consistent with the measurement objective.

7.10 Premium and Claims Reserve risks	Factors calibration: Some respondents believe that factors are too high for certain segments.	The calibration of factors is based on data collected and is subject to review during the monitoring period. Certain factors were adjusted based on the information received in the 2018 supplementary data collection exercise.										
7.10 Premium and Claims Reserve risks	Aggregation: A number of respondents commented that there is a lack of geographic diversification /no geographical diversification within a region.	The IAIS reviewed the Non-life correlation structure. As a result the factors within each ICS category were introduced as follows: <table><tr><td>Categories</td><td>Correlation factor between segments of the category</td></tr><tr><td>Liability-like</td><td>50%</td></tr><tr><td>Motor-like</td><td>75%</td></tr><tr><td>Property-like</td><td>50%</td></tr><tr><td>other</td><td>25%</td></tr></table>	Categories	Correlation factor between segments of the category	Liability-like	50%	Motor-like	75%	Property-like	50%	other	25%
Categories	Correlation factor between segments of the category											
Liability-like	50%											
Motor-like	75%											
Property-like	50%											
other	25%											
7.10 Premium and Claims Reserve risks	Latent liability: Stakeholders were generally comfortable with the inclusion of latent liability in other factors; however, some respondents did not agree with the advisability of including U.S. Workers' Compensation in the list of lines with material latent liability risk.	The IAIS reviewed the overall factors and decided to retain the current structure.										
7.10 Premium and Claims Reserve risks	Insurer Specific Factors (ISF): Some respondents support ISF.	Based in the information received during field testing, the IAIS decided to eliminate consideration of ISF.										

Main comments on Catastrophe risk

Ref.	Summary of comments received	IAIS response
7.11 Catastrophe risk	List of Perils/ Missing Perils: Some respondents felt that the list of perils is appropriate while others felt it is incomplete.	The IAIS decided to retain the current list of perils for the monitoring period. The list of perils may be reviewed depending on evidence collected during the monitoring period.
7.11 Catastrophe risk	Classification of risks: Some respondents felt that life catastrophe risk and non-life catastrophe risks should be captured in separate modules given the fundamental differences in exposures.	The IAIS considers that the current classification of risks produces an appropriate outcome and decided not to make changes in the design for ICS Version 2.0 for the monitoring period.
7.11 Catastrophe risk	Catastrophe Scenarios: Respondents commented on specific catastrophe scenarios: a. Global Pandemic – The current pandemic stress only considers death. b. Terrorist Attack Scenario – It is calibrated to beyond 1/200 as the scenario described the event taking place in the most onerous location. c. Discretion – IAIG's should be given the discretion to apply "other catastrophe scenarios" depending on materiality. Certain scenarios are burdensome to calculate (eg 5 tonne bomb blast).	The IAIS decided to retain the current catastrophe scenarios for ICS Version 2.0 for the monitoring period. Scenarios may be reviewed depending on evidence collected during the monitoring period. The IAIS believes there should be limited discretion in a standard method.

7.11 Catastrophe risk	Correlation and Diversification: A number of respondents cited that geographical diversification between catastrophe risks could be better represented in the ICS standard method, but no suggestions were given.	The IAIS decided to retain the current design for ICS Version 2.0 for the monitoring period due to a lack evidence to support geographical differentiation.
7.11 Catastrophe risk	Safeguards for using Nat Cat models: Some respondents enquired how to ensure appropriateness of the use of these models.	There is general support for Natural Catastrophe models. Safeguards will be developed for the monitoring period.

Main comments on Interest Rate risk (IRR)

Ref.	Summary of comments received	IAIS response
7.12 Interest Rate risk	Some respondents suggested replacing the Dynamic Nelson-Siegel (DNS) model with the AFNS model (Arbitrage-free Nelson-Siegel).	The IAIS decided to retain the DNS model for ICS Version 2.0 for the monitoring period. The lack of granular market data for some currencies may not support the arbitrage-freeness of the AFNS. Applying a differentiated approach, by using either the AFNS or DNS depending on the currency would add complexity to the calculation and undermine consistency and comparability
7.12 Interest Rate risk	Most respondents suggest the LTFR stress should have the same cap the maximum LTFR annual change is subject to, due to, for example, it representing the economy's long-term equilibrium, or that the LTFR should be fixed and not be changed at all. Other respondents believe a stress on the capital requirement and valuation of liabilities represent different objectives, and should not be subject to the same cap.	The IAIS will maintain a stress on the LTFR of 10%. This is set independently from the admissible annual change to the LTFR set out in the base yield curve methodology as part of the market-adjusted valuation approach.
7.12 Interest Rate risk	Several respondents believe the interest rate risk correlation between different economies should not	The aggregation of IRR risks across currencies for ICS Version 2.0 for the monitoring period will not rely on classifying net

	depend on whether an IAIG's net position is long or short. Some believe further that the correlation factors are too onerous and that offsetting of interest rate stress impacts between currencies should be fully allowed.	positions as long or short. Following the changes incorporated in 2019 Field Testing, the IAIS has decided to maintain an aggregation approach, which does not require this classification of net positions between long and short. The IAIS has decided to maintain the 75% correlation assumption between currencies.
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Main comments on Non-Default Spread Risk (NDSR)

Ref.	Summary of comments received	IAIS response
7.13 Non-Default Spread risk	Responses were polarised between stakeholders who agreed with the inclusion of NDSR in the ICS capital requirement and those who disagreed. Those that disagreed with its inclusion consider that that NDSR captures liquidity risk, which is excluded from the ICS. These respondents see the liquidity in the MAV yield adjustment to be a different type of liquidity and distinguishes between point-in-time valuations with risk scenario events. Some stakeholders commented that NDSR cannot be hedged due to the workings of the MAV buckets.	On liquidity: The NDSR risk charge takes into account a quarter of the spread for the calibration of the shock coefficient, which also aims to exclude the liquidity component of the spread. On hedging: An important feature of the NDSR risk charge is that a perfectly matched liability portfolio with corresponding assets within the top bucket would not attract any NDSR risk charges. For the Middle and General Buckets, the observation is right - a perfect asset-liability match does not imply the absence of NDSR.
7.13 Non-Default Spread risk	Respondents that support the inclusion of NDSR state that it is reasonable to include it as insurers are exposed to such a risk, but that work should be done on calibration refinement.	The stress levels were adjusted for 2019 Field Testing and produced more balanced results than in 2018 Field Testing.

Main comments on Equity and Real Estate risk

Ref.	Summary of comments received	IAIS response
7.14 Equity risk	The segmentation for equity risk should be more granular, and include eg a separate segment and (lower) risk charge and/or (lower) correlation for infrastructure, as well as strategic equity, long-term investments. This would allow insurers to better cover long-term liability cash flows and benefit from illiquidity premia.	During the monitoring period, as part of the work on infrastructure investments and strategic equity, the IAIS will be considering whether the current segmentation should be expanded beyond the current four categories. This would include the possibility of additional segments on infrastructure investments and strategic equity, the materiality of insurance industry's exposures, and the availability/appropriateness of data to calibrate the risk charges.
7.14 Equity risk	Based on historical data, the spikes in implied volatility are temporary; therefore, the equity volatility shock should not be permanent, and should be re-calibrated. To take the correlation into account, the price and volatility shocks should be combined, and not be just additive.	The stresses for implied volatilities were revised by raising the short-term and lowering the long-term volatility factors. The IAIS collected data for running the level and volatility shocks as a combined shock, in addition to running the shocks separately. It was decided to continue to run the shocks separately and not to run the shocks together for ICS Version 2.0 for the monitoring period.
7.15 Real Estate risk	The real estate shock is too high. Recalibration could be done (eg based on historical prices, diversification benefits between real estate types or geographic location).	In response to comments received on past ICS consultations, the IAIS collected further evidence and the real estate shock was previously revised from 30% to 25%.

Main comments on Currency risk

Ref.	Summary of comments received	IAIS response
7.16 Currency risk	The portion of the currency risk charge relating to currency translation risk should be exempt from the risk charge as currency translation does not have any impact on an IAIG's ability to meet policyholder liabilities.	The currency risk charge targets an excessive asset - liability mismatch (in both ways) in any currency, other than the reference currency. Such a mismatch, when facing negative exchange rate movements, may affect the Net Asset Value of the IAIG at a point in time when such resources may be needed.
7.16 Currency risk	Respondents had split views on the 10% offset. Some stakeholders thought that it was not prudent enough and should be lowered; some other thought it was too prudent. There were also comments that the design should vary by type of business. More specifically, non-life business should receive a higher offset.	The IAIS acknowledges that a single prescribed offset figure may not capture differences between types of business (eg life versus non-life), but it strikes an acceptable balance between simplicity and accuracy. The offset should approximate the percentage of capital requirements over net insurance liabilities needed to maintain operations (subsidiaries or branches) in the foreign jurisdiction.
7.16 Currency risk	Some stakeholders stated that, compared to historical data, some of the shock sizes are very high and far exceed a historically calibrated 1-in-200-year event level. Some stakeholders would prefer the IAIS to consider a simpler approach to currency risk.	The IAIS calibrated the currency pairs' stresses using historical data. The Currency risk stress calibration was revised in 2019 to account for the longer time-series for some currencies. The IAIS decided to retain the current design for the currency risk charge for ICS Version 2.0 for the monitoring period as it strikes an appropriate balance between simplicity and risk sensitivity.

Main comments on Asset Concentration risk (ACR)

Ref.	Summary of comments received	IAIS response
7.17 Asset Concentration risk	Stakeholders commented that the two alternative approaches (Granularity Adjustment and threshold approach with lower incremental risk charge for short-term obligations at regulated banks): - could alleviate the higher asset concentration risk charges due to limited investments possibilities in developing asset markets (no other approaches were suggested by the respondents) - Are not targeted solutions for developing asset markets and the IAIS does not need a redesign of the approach for ACR in general - Should be described in more detail	The IAIS field tested the granularity adjustment approach as a way to handle idiosyncratic risks not captured in the market and credit risks. In response to evidence collected during the 2019 Field Testing exercise, mainly about the level reporting required, the granularity adjustment has been simplified. The revised granularity adjustment approach to be used for ICS Version 2.0 for the Monitoring Period allows for a prudent trade-off between the accuracy of the risk measurement and the extent of the required reporting.

Main comments on Credit risk

Ref.	Summary of comments received	IAIS response
7.18 Credit risk	The lack of external ratings for some investments results in overly punitive credit risk charges. As such, the use of internal ratings, subject to proper governance, should be recognised within the ICS Credit risk approach and would also allow firms to be less reliant on external credit ratings.	Currently, the use of internal ratings for the calculation of the credit risk charge is not allowed. This issue will be considered as part of the broader work on the potential use of internal models for the calculation of the ICS capital requirement. To this end, the IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.

7.18 Credit risk	The Credit risk approach in the ICS should accommodate best practices across various jurisdictional regulatory frameworks.	The current Credit risk approach does not preclude the use of ratings issued by other rating agencies recognised by an IAIG's home insurance regulator for local capital determination purposes, subject to approval by the IAIS. As long as the credit rating agency has publicly available default and transition statistics extending back to at least seven years and meets certain criteria (six criteria in total including independence, transparency, and objectivity) as described in detail in the field testing technical specifications, the IAIS will recognise those ratings in the ICS Version 2.0 for the monitoring period.
7.18 Credit risk	Commercial and agricultural mortgage stresses need to be recalibrated in order to properly reflect the credit risk profile of such investments and should be further aligned with local jurisdictional experience. Certain residential mortgages are subject to excessive risk charges due to unrecognized risk offsets such as collateral and government guarantees. The mortgage stress factors under the current Credit risk design are based on the Basel framework, intended for banks. Applying the same factors based on bank portfolio credit history (delinquency rates) to insurance company portfolios results in higher charges than warranted for these assets.	The IAIS started collecting mortgage loan portfolio data from firms in 2019, with the aim of reviewing the appropriateness of the calibration of mortgage credit risk within the ICS during the monitoring period.
7.18 Credit risk	The treatment of collateralised reinsurance implicitly assumes that collateral is only used in the transaction when the counterparty is of unreliable credit quality. The reinsurance business model, however, requires that nearly all reinsurers have high credit ratings.	The IAIS has decided to maintain the haircut approach for non-life reinsurance collateral for ICS Version 2.0 for the monitoring period.

	In reinsurance, collateral is typically used to deal with dispute risk and the ability to enforce judgments. The issue over collectability arises only at the occurrence of two events—the default of the reinsurer and the decline in the value of the collateral. The proposal in paragraph 459 of the Consultation would be one way to resolve the situation.	
7.18 Credit risk	The inclusion of supervisor-owned and controlled credit assessment (SOCCA) processes would be acceptable if they are comparable and transparent. The use of SOCCA and NAIC Designations would enhance the risk sensitivity of the ICS by reducing reliance on external credit ratings.	The IAIS has determined criteria for the recognition of SOCCA processes. The decision on whether SOCCA processes will be part of the ICS standard method as a national discretion or included in other methods of calculation of the ICS capital requirement will be made by the IAIS by the end of the monitoring period.
7.18 Credit risk	The stress factors for outstanding premiums and amounts due from agents and brokers are excessive given they are very short term and well diversified.	The Credit risk factor for unrated short-term exposures will be used for agent/broker balances for ICS Version 2.0 for the monitoring period.

Main comments on Operational risk

Ref.	Summary of comments received	IAIS response
7.19 Operational risk	There were differing views on the appropriateness of the current factor-based approach and exposure measures.	While it has limitations, a factor-based approach in this context strikes an appropriate balance between risk-sensitivity and simplicity.

7.19 Operational risk	There were differing views on the calibration of risk factors: • It gives counterintuitive results, ie life insurer operational risk is expected to be higher than non-life operational risk. • Excessive factors and risk charges; • Factors are too conservative and not prudent enough • Growth rate threshold of 20% is unreasonable for emerging markets; growth rates should be inflation adjusted as opposed to being based on nominal growth	Given the nature of Operational risk and the lack of appropriate data, calibration has proved a challenge. • Relative results for life/non-life will continue to be monitored. External data indicates that liabilities may be a better exposure for risk from life operations, while premiums may be a better exposure for risk from non-life operations, but there is insufficient evidence available to justify a change. • In response to evidence collected during Field Testing, calibration of factors was revised. For Life Risk calibration was increased from 0.4% to 0.45% of liabilities; for Life (Non Risk), calibration was decreased from 0.45% to 0.4% of liabilities. During the monitoring period, the IAIS will continue monitoring the appropriateness of these factors. • An inflation adjustment of the growth charge has not shown materially different results during Field Testing.
7.19 Operational risk	Respondents proposed alternative approaches to capturing Operational risk, as follows: • Current assumption of full correlation of Operational risk across all regions is inappropriate; diversification should be allowed between risks. • Simple capital add-on based on a percentage of the capital requirement given the measurement of Operational risk is highly subjective. • Replace the factor-based approach with a qualitative approach. • Use internal model Operational risk charge; and allow flexibility to override the formulaic output	The IAIS acknowledges the limitations around a factor-based approach, however the current approach represents a good trade-off between risk-sensitivity and simplicity. Currently, the use of internal models for the calculation of the operational risk charge is not allowed. This issue will be considered as part of the broader work on the potential use of internal models for the calculation of capital requirements. To this end, the IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.

	• In the absence of internal models, introduce caps and floors to prevent un-intuitive results. • Adopt concepts of the Standardized Approach defined in the Basel II framework, adapted to insurance business model or remove Operational risk because any attempt would be inappropriate	
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Main comments on Aggregation/Diversification

Ref.	Summary of comments received	IAIS response
7.20 Aggregation/Diversification of ICS risk charges	The aggregation approach between Operational risk and the other risks was criticised for the following reasons: • It is not appropriate to add the Operational risk capital charge to the capital charges of other risks without any allowance for diversification. • There are many scenarios that would generate Operational risk independently of the experience on other risks.	Estimating the correlation coefficients between Operational risk and other risks is challenging, considering the nature of Operational risk which covers a wide range of scenarios.
7.20 Aggregation/Diversification of ICS risk charges	Comments were made on levels of correlation coefficients being too high across risks, and within Life and Market risks and that correlation parameters should be determined by the local jurisdictional supervisor, or local regulatory parameters should be used.	The calibrations of correlations under stress conditions are challenging as it requires large amount of reliable data. Also, the reduction in the correlations in the standard method may lead to optimistic results for some insurers as the strength of correlations would differ from portfolio to portfolio. Therefore, any reduction is not currently considered.

		The IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.
7.20 Aggregation/Diversification of ICS risk charges	Comments regarding the changes in the market correlation matrix, inclusion of NDSR and simplification of the correlation between IRR and other risks were made.	The correlations between NDSR and Equity risk/Real Estate risk are positive only for the NDSR Up scenario and the correlation with the NDSR Down scenario are 0. Although the correlations between NDSR and the other risks are positive for both the Up scenario and Down scenario, the number is the lowest one (25%). The aggregation approach for IRR has been revised and the classification into net short and net long positions has been removed.
7.20 Aggregation/Diversification of ICS risk charges	Comments were made on the current approach being overly simplistic. Some respondents proposed the use of internal models to deal with aggregation/diversification.	The standard method does not adopt a complex approach to strike the balance between simplicity and risk sensitivity. The IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.
7.20 Aggregation/Diversification of ICS risk charges	Respondents claimed there was limited recognition of geographical diversification within Life and Non-life risks.	The approach already recognises geographical diversification within Non-life risks. Regarding Life risks, please refer to the Life risks section of this document.

Main comments on Tax Treatment

Ref.	Summary of comments received	IAIS response
8 Tax Treatment	GAAP DTA: Some respondents support updating jurisdictional GAAP/SAP DTAs for the ICS adjustment for a uniform approach while others suggest applying a more stringent threshold for the reassessed GAAP/SAP than IFRS/USGAAP.	It would be ideal if the utilisation of starting GAAP DTAs (prior to adjustment for MAV or GAAP Plus) were consistently assessed across all audited group GAAP/SAP financial statements. However, utilisation assessment rules differ between jurisdictional GAAPs and SAPs. The IAIS concluded that reassessment based on a single consistent method as defined by the IAIS would likely be difficult for management to perform and for supervisors to evaluate. The DTA utilisation assessment based on audited GAAP/SAP reporting is used for the starting GAAP DTA. An exception was made for audited US SAP DTAs. Where the amount based on US GAAP rules can be easily differentiated from the more conservative reported amount based on US SAP rules, an adjustment is applied to the starting US SAP DTA without substantive judgement so that it reflects the US GAAP amount.
8 Tax Treatment	Top-down or Bottom-up: Some respondents support the Bottom-up approach because tax is calculated at an entity level or sub-tax group level.	While the Bottom-up approach is a theoretically correct approach, the ICS is a group-wide capital standard and calculation of capital requirement at the entity level would be cost prohibitive. Therefore, the Top-down approach is being used.
8 Tax Treatment	Group Effective tax rate: Some respondents believe the group effective tax rate calculation is a reasonable metrics under the Top-Down approach, while some IAIS members and stakeholders raised concerns on the volatility of the group effective tax rate. An adjustment of non-recurring items was also	The 2018 Field Testing calculation used a group effective tax rate that was based on consolidated financial statements. This approach, while simple, exposed Volunteer Groups to volatility year over year.

	suggested. However, no approach or list of non-recurring tax adjustment items was provided.	Considering the balance between simplicity, practicality and the stability of group effective tax rates year over year, the weighted average statutory tax rate will be used for ICS Version 2.0 during the monitoring period. The IAIS considered allowing for an adjustment for non-recurring items; however, there was difficulty defining non-recurring items in a way that would be applicable to all IAIG's.
8 Tax Treatment	DTA on MOCE: Some respondents do not agree with the idea that DTA on MOCE be recognised, while others suggest DTA on MOCE be recognised if MOCE is on the ICS balance sheet and it is treated as a liability item to calculate the ICS ratio.	Whether MOCE generates a DTA depends on the definition and treatment of MOCE in the ICS calculation. For ICS Version 2.0 for the monitoring period the IAIS agreed to treat the percentile MOCE as a taxable temporary difference for simplification purposes.
8 Tax Treatment	Utilisation assessment of DTA from the ICS adjustment and the tax effect on the capital requirement: Some respondents suggest that the utilisation assessment of the DTA from the ICS adjustment and the tax effect on the capital requirement is too prudent. For refinement, it was suggested a future taxable income projection and tax loss carry backs be considered for the utilisation assessment.	The utilisation assessment of DTAs resulting from the ICS adjustment (moving from GAAP to MAV or GAAP Plus valuation) is capped by DTLs for 2019 Field Testing. This simple, conservative method was adopted primarily because the impact of DTAs from the ICS adjustment is not expected to be significant. The IAIS considered comments from stakeholders and made some adjustments for 2019 Field Testing for the utilisation assessment of the tax effect on the capital requirement. Future taxable income projections and tax loss carry backs, subject to certain limitations and deductions for imprecision, are allowed for that utilisation assessment.

8 Tax Treatment	Treatment of utilisable tax effect on the capital requirement: Respondents generally support the treatment of utilisable tax effect on the capital requirement (i.e., net with capital requirement).	It was decided to maintain the treatment for ICS Version 2.0 for the monitoring period considering the tax effect on the capital requirement mitigates the stress loss by decreasing the tax payment in a stress condition.
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Main comments on GAAP Plus

Ref.	Summary of comments received	IAIS response
9.1 GAAP with adjustments	Some respondents questioned whether GAAP Plus should adhere strictly to the principles of GAAP Plus (ie limited adjustments, promote symmetry in accounting) or make revisions to align more closely to MAV and reduce differences between accounting frameworks	GAAP Plus was developed to address some IAIS Members' concerns raised over reliability, transparency and the burden of implementing and maintaining a new valuation approach, in addition to that used for public reporting, under the ICS. GAAP Plus aims to strike a balance between comparability and the benefits derived from utilising GAAP balances, processes and systems as a source for ICS valuation. It is therefore not proposed to further amend the GAAP Plus approach to maximize comparability as this would not be in keeping with the original intent and objectives for GAAP Plus. However, we will continue to review whether the correct balance is met as further evidence is collected during the monitoring period, and as standard practice develops for new GAAP accounting approaches.
9.1 GAAP with adjustments	Some respondents raised questions on how IFRS 17 will be adapted to develop a GAAP Plus approach for IFRS.	The IAIS has developed an approach for companies reporting under IFRS with input from Volunteer Groups, accounting practitioners, actuaries, and interested stakeholders by conducting surveys and roundtables, and through the ICS Version 2.0 consultation. The IAIS will continue to refine the

		approach should field testing results indicate that amendments may be required.
9.1 GAAP with adjustments	Some respondents questioned whether there should be operational criteria and supervisory limits adopted under GAAP Plus (i.e. discounting guardrails, deferred gain recognition, ALM criteria under AOCI adjustment)	The IAIS does not yet have enough data to determine whether it may be necessary to develop guardrails in order to narrow the range of practice in regards to insurance liability discounting. Therefore, no action has been taken at this time. The subject may be revisited during the monitoring period. The IAIS has included operational criteria designed to ensure that certain asset-liability matching criteria are met in order to apply the AOCI adjustment, which depends on the existence of effective ALM. Also in connection with the AOCI adjustment, the IAIS evaluated whether to defer gain recognition on the sale of certain assets to deter asset sales purely for purposes of gains harvesting. It was determined that the incentive to trigger gains purely for purposes of the ICS was not significant given other considerations such as local solvency frameworks, ALM practices and tax; therefore no changes were proposed.

Main comments on Internal models

Ref.	Summary of comments received	IAIS response
9.2 Internal Models	Several respondents asked for more clarity about the application of pre-requisites for the submission of internal models' result during the monitoring period. Stakeholders asked whether flexibility in the fulfilment of the prerequisites will be allowed during the monitoring period.	The group-wide supervisor is responsible for the assessment of the fulfilment of the prerequisites. During the monitoring period, the group-wide supervisors will have discretion whether to allow IAIGs to provide additional reporting of internal model results. IAIGs that intend to submit internal model results during the monitoring period will be required to complete a self-assessment template to assess their degree of compliance with

		the pre-requisites. The self-assessment template will accompany the submission of internal model results. If the prerequisites are not fully met, but the IAIG intends to submit internal model results, then it should discuss it and agree this with its GWS. As not all jurisdictions currently allows for the use of internal models for the calculation of capital requirements, supervisory approval for the use of the internal model for data submission during the monitoring period is not a pre-requisite. The IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.
9.2 Internal Models	It was questioned whether diversification should be allowed between partial internal model and ICS formula.	This issue will be considered as part of the broader work on the potential use of internal models for the calculation of the ICS capital requirement. To this end, the IAIS intends to make a decision on the potential use of internal models for the calculation of the ICS capital requirement by the end of the monitoring period.
9.2 Internal Models	Some respondents suggested using the profit and loss attribution as part of the list of prerequisites.	The profit and loss attribution is already included in the applicable prerequisites on calibration, validation and use test.